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Inventory

A QUARTERLY JOURNAL ON ALCOHOL AND ALCOHOLISM

PUBLISHED BY THE N. C. DEPARTMENT OF MENTAL HEALTH

TREATMENT

REHABILITATION

EDUCATION

PREVENTION

N. C. ALCOHOLIC REHABILITATION CENTER

A.R.C. at Butner

A.R.C. at Black Mountain

About the Centers . . .

The plans are to have four A.R.C.'s. Two are operating now, a third is expected to open soon, and a fourth, hopefully, will open by the end of July. The A.R.C.'s are in-residence treatment facilities operated by the Department of Mental Health—one in each of its regions. At the present time, the following policies will apply generally to the A.R.C.'s. However, they will be reviewed after the centers are well operating and changes may be made then.

A.R.C. Treatment Methods . . .

Treatment is by psychotherapy and consists of group discussions led by the professional staff, educational films, individual consultations with staff members, vocational guidance, recreation, rest, proper food and prescribed medications.

Length of Stay . . .

The basic treatment program is based on a 28-day schedule. The patient may remain for a longer period if, in the opinion of the staff, it will be of further therapeutic benefit to him. No applications for less than 28 days are accepted.

Admission Requirements . . .

1. Admission is entirely on a voluntary basis and a person cannot be accepted on court order or legal commitment. The Center cannot accept persons who have any court hearing or legal action pending which would interfere with or curtail their treatment program.

2. An appointment for admission is obtained by written or telephone application to the Admitting Officer. All appointments are confirmed by mail. They should be made through a physician or other professional person in the prospective patient's community.

3. Patients are expected to be sober on admission, and the Center will not admit a person if intoxication impairs his functioning. The Center does not have nursing or hospital facilities to treat acute intoxication.

4. A written report of a recent physical examination by a licensed physician must be presented upon admission. The patient's physical and mental condition must be good enough to enable him to participate in the treatment program, walk up and down stairs, etc. The Center does not have hospital beds or nursing staff for the treatment of serious physical or mental disorders.

5. A fee of $7.00 per day is charged for the four weeks of treatment. This may be paid by cash or check at the time of admission, or by an agreement signed by the patient at the time of admission — promising to pay the full sum at some time after discharge.

If a person is indigent he may obtain a letter stating this fact from his local county welfare agency, and upon presentation of this letter at the time of admission the request for payment will be deferred.

The Center does not refuse to admit any person because of lack of money, but feels that patients having treatment should take responsibility for the cost if they are able to pay all or part at the time of admission or later. Each case is handled individually.

6. A social history, compiled by a trained social worker in the local welfare or family service agency or other professional organization is required. Arrangements for the history should be made early enough so that it reaches the Center within a week following admission.

Admitting Days . . .

Patients are admitted to the Center five days a week, Monday through Friday, between 9:00 a.m. and 12:00 noon and 1:00 p.m. and 5:00 p.m. by appointments as described above.

The A.R.C.'s

For an appointment contact the Admitting Office at:

A.R.C. at Black Mountain (Just off old Highway 70 east of Western N. C. Sanatorium), serving the Western Region—Tel: (704) 669-6481.

A.R.C. at Butner (12 miles north of Durham off Highway 15), serving all other regions—Tel: (919) 985-6541.

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INVENTORY

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This journal is printed as a public information service. Persons desiring a place on the free mailing list must send in a written request, with the exception that *new* requests from *individuals* residing outside North Carolina can no longer be accepted. The views expressed in the articles published are those of the authors and not necessarily those of *Inventory*. Manuscripts are invited with the understanding that no fees can be paid.

Write: INVENTORY, P. O. Box 9494, Raleigh, North Carolina 27603.

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N.C. Correctional Center for Alcoholics

BY R. G. CRUMMIE, M.D.

THE North Carolina Correctional Center for Alcoholics is a 450-bed unit of the State Department of Correction. Located in Raleigh, it is a part of the Central Correctional Complex.

All males convicted of public drunkenness and committed to the custody of the Commissioner of Correction are examined at this diagnostic and treatment center. Each man is evaluated as far as his social, medical and psychiatric needs are concerned and then placed in a treatment program. The purpose of this program is to rehabilitate the alcoholic by stopping his self-destructive patterns of behavior. By doing so, we are actually saving the lives of many of these men.

R. G. Crummie, M.D., superintendent of the N. C. Correctional Center for Alcoholics, explains the program of this diagnostic and treatment center to members of the Alcoholism Programs of North Carolina at its spring meeting in Jamestown March 28. This article is based on his talk at this meeting. The program is the result of joint action between the State Departments of Mental Health and Correction. Dr. Crummie is on the staff of the mental health department.

In 1968, a study was made on 100 males convicted of public drunkenness and committed to the custody of the Commissioner of Correction. The medical study revealed the following:

1) Five per cent of these patients had severe heart disorders which were not being treated before incarceration, and the patient was now in grave medical trouble.

2) Five per cent had severe lung disease in need of immediate medical attention.

3) Ten per cent had severe problems with hypertension.

4) Twelve per cent had acute psychiatric disorders, such as paranoid schizophrenia, chronic undifferentiated schizophrenia, acute brain syndrome, chronic brain syndrome, and mental deficiency with and without psychoses.

5) Five per cent had acute infection which needed immediate antibiotics.

6) Five per cent needed other surgical and medical treatment for a variety of disorders.

8) Two per cent had active tuberculosis.

The above accounts for 60 per cent of the 100 cases studied. These problems were all serious ones which needed immediate medical attention. All of these conditions were controlled with appropriate medication.

The remaining 40 per cent of the men were by no means in excellent health. Almost all of them suffered

from neglect and moderate to severe malnutrition with symptoms of gastritis and also with serious dental problems. After these inmates were treated medically and began to feel better physicially, their attitudes changed and they became more receptive to our therapeutic program.

With the understanding that we are constantly trying to find ways of being more therapeutic, we give you the following outline of our present treatment program that is divided into four phases:

Phase I—The patient is put in the infirmary where he is evaluated medically, psychiatrically and socially, and then treated appropriately. Blood and laboratory studies are made. Basic background information and a social history are elicited through written examinations. Some of the men who have lost contact with reality and are basically psychotic are started on tranquilizers. The men are also introduced to group therapy. They listen to records and have group discussions concerning them.

Phase II—This phase begins when the patient is let out of the infirmary. Since his medical condition or psychiatric condition has been brought under control, he is more receptive to the group therapy which now includes movies and group discussions in addition to records and group discussions. In these first two phases the patient receives almost continuous therapy—about eleven hours each day.

Phase III—Group therapy is continued and the men are worked with in groups according to the section of the State from which they come. Each group of men is assigned to the alcoholic rehabilitation officer for the area where they will be sent after completing this phase. The men are given light work assignments and special privileges, such as leisure time in the dayroom and television privileges. Each man is evaluated by the therapist in charge and a plan of action is made for each individual.

Phase IV—The rehabilitation officer for each section of the State who established contact with his men while they were at the Center now works with them in the area unit to further develop, determine and carry out a plan of action for their release. He works through community resources and continues to use the diagnostic and treatment services of the Center. The men, at this point, having progressed through the first three phases of the program are ready for placement. They are expected to contact their rehabilitation officer, whom they already know, and discuss with him such things as job placement, an evaluation of his program, and his plans for the future. The rehabilitation officer and the staff at the Center will release each man at the time they jointly decide is most "therapeutic" for the individual. He may be released to his job back in his own community at this time. (Many individuals will be able to complete these four phases in 30 days. For some it will take longer. The department may have custody up to six months.)

Phase V—The purpose of this phase is to establish a continuous treatment program for individuals committed to the custody of the Commissioner of Corrections for public drunkenness after their release. Hopefully, community leaders, civic groups and other organizations will help them get involved in worthwhile community activities and become productive individuals. The men will also maintain contact with their rehabilitation officer and may meet with him on occasion in groups so that their efforts to continue their sobriety may be strengthened.

Social Worker Writes

I am a social worker with the Richmond County Welfare Department. I will appreciate your adding my name to the mailing list to receive *Inventory*.

Mrs. Martha K. Fowler
Hamlet, N. C.

For Use In Hospital Library

We would like to request that you send us four copies of your journal, *Inventory*. We are a hospital of 862 beds and the only Veterans Hospital in the Philippines. These journals will tremendously help our personnel composed of physicians and paramedical staff. They will greatly contribute to our expanding Medical Library.

Mrs. Araceli B. Maramag
Chief Librarian
Veterans Memorial Hospital
Diliman, Quezon City
Republic of Philippines

For Senior High Groups

Please send me one or two copies of the latest three or four issues of *Inventory* that I might use for information for senior high groups interested in alcohol (from their standpoint).

T. N. Massey, Jr., M.D.
Charlotte, N. C.

Former Patient

Please send me *Inventory*. My stay at the A.R.C. at Butner has been a much greater help to me than I can ever tell. Now I would like to help other people. Thanks.

Anonymous
Greensboro, N. C.

Asks for Manual

Would it be possible for you to send me 15 copies of your *Manual on Alcoholism for Social Workers?* I would like to have one for each of our field representatives.

Ellen Douglas Bush
Department of Public Welfare
Raleigh, N. C.

Works With Alcoholics

I am a Baptist pastor who is interested in the alcoholic problem and who does some work with alcoholics. I would appreciate receiving the journal, *Inventory*.

J. Huber Dixon
Warsaw, N. C.

Education Research Project

As alcohol education consultant in the five-year research-education project (A Comprehensive Community Orientated Alcohol Education Program in two Mississippi communities) I am working in both the public schools and the adult community assisting individuals and groups in learning about alcohol and alcoholism. This demonstration project is being carried out through the cooperation and direction of Dr. Gerald Globetti of Mississippi State University and Mrs. Vashti I. Cain of the State Department of Education.

For my own information as well as that of the two communities in which I work, would you please put me on the list for *Inventory?*

Harold B. Armstrong
Tupelo, Mississippi

Above is Dr. Samuel Mallov with officials of the N. C. Department of Mental Health and other distinguished lecturers of the John W. Umstead Series of Distinguished Lectures held at Raleigh in February of 1968. From left to right are: Dr. Mallov; Dr. Eugene A. Hargrove, Commissioner of Mental Health; Dr. William P. Wilson, distinguished lecturer; Dr. R. J. Blackley, director of the Division of Alcoholism; and Dr. Peter Witt, distinguished lecturer.

The body does certain things to alcohol while alcohol produces certain changes in the body.

THE PHARMACOLOGY OF ALCOHOL

BY SAMUEL MALLOV, PH.D.

A distinguished lecturer of the 1968 John W. Umstead Series of Distinguished Lectures, Dr. Mallov is a professor of pharmacology, Department of Pharmacology, State University of New York, Upstate Medical Center, Syracuse, N. Y. This article is his distinguished lecture.

ETHYL alcohol is a somewhat unique substance in several respects. First of all it is both a drug and a food. It is a drug in that it exerts a number of powerful pharmacological effects on the body. As a foodstuff it is able to provide the body with energy for carrying out various life processes such as biosynthesis, nerve conduction and muscle contraction.

Alcohol, in its role as drug, differs from the general run of drugs in that the latter are generally prescribed by a physician, administered by the physician and given in small quantities for their therapeutic rather than toxic actions. On the other hand alcohol is seldom prescribed by the physician these days, is self-administered, is taken in large quantities, and is often imbibed with the express purpose of producing a toxic effect on the central nervous system.

As is the case with most drugs, when alcohol is consumed there is an interaction between the alcohol and the body; i.e., the body does certain things to the alcohol while the alcohol in turn produces certain changes in the body. I would first like to consider the action of the body on alcohol; that it to say, "The Metabolism of Alcohol.".

Absorption. Alcohol, when ingested, is rapidly absorbed into the bloodstream from the gastrointestinal tract. When taken on an empty stomach, alcohol can be detected in the circulation within five minutes, and peak concentrations of alcohol in the blood are attained within an hour. Unlike several other foodstuffs, alcohol passes across the membranes of the gut with ease since no digestive enzymes are required to break the alcohol down into simpler components before absorption. It is also absorbed from the stomach as well as from the small intestine so that absorption of ingested alcohol starts immediately.

About 20 per cent of the amount of alcohol taken is absorbed from the stomach; the remainder is absorbed more rapidly from the small intestine. The rate of absorption varies with local factors in the gastrointestinal tract. Thus, if food is present in the stomach, the rate of absorption is reduced. One reason for this is that food delays the rate at which the contents of the stomach are emptied into the small intestine where alcohol is absorbed most rapidly. A high concentration of alcohol (50 per cent or so as in whisky, brandy) tends to slow down absorption because of the irritant action of alcohol on the membranes of the gastrointestinal tract. Large quantities of alcohol taken in high concentration may also cause closing down of the pyloric sphincter, the valve controlling exit

Food in the stomach slows

of materials from the stomach to the small intestine.

Distribution. From the bloodstream alcohol distributes itself among all the tissues and fluids of the body by diffusion. It permeates cells freely and, since it dissolves readily in water, is eventually present in each tissue in an amount which is proportional to the water content of that tissue. After a while an equilibrium is established between the alcohol in the circulation and that in each tissue. The concentrations then are not the same in each tissue, as has been pointed out, and depend on the water content. Thus the concentration of alcohol in the urine and in the spinal fluid will be somewhat higher than in the blood after equilibrium has been established since there is a higher per cent of water in these fluids than in the blood.

Oxidation. After alcohol enters the blood and tissues three pathways are open to it. First, it is oxidized to carbon dioxide and water. Over 90 per cent of the alcohol ingested is thus burned in a matter of hours. Second, a smaller quantity of the alcohol (one to ten per cent) is excreted, mainly in unchanged form, via the kidneys and lungs into the urine and expired air. Third, a small and variable quantity of the alcohol is converted in the body to other metabolites that are eventually burned or excreted.

Let us first consider the oxidation of alcohol. When alcohol is burned in an alcohol vapor lamp it gives off energy in the form of light and heat, and is converted to carbon dioxide and water. The same holds true in the body—with two exceptions. Much

down the rate at which alcohol is absorbed.

of the energy that is given off as a result of the oxidation of alcohol in vivo is converted to, and stored as, high energy chemical bonds. This energy may be drawn upon as needed to carry out various energy-consuming life processes as mentioned. Second, the conversion of alcohol to carbon dioxide and water proceeds by a series of enzyme-controlled steps over a period of time. This permits the body to exert some control over the process and, hopefully, for the pharmacologist or clinician to do the same. It would be very helpful to the physician, for example, to be able to influence these enzymatic reactions by means of some drug in such a manner as to speed up the rate of alcohol burning in the body. He would then be able to rapidly detoxify an individual who is severely drunk and perhaps thereby prevent a fatality.

The first step in the burning of alcohol is its conversion to the compound acetaldehyde. This occurs predominantly in the liver. Animals whose livers have been removed or poisoned burn alcohol at a very low rate. Similarly, humans with liver disease such as cirrhosis tend to burn alcohol more slowly, and the alcohol remains in the body of such individuals for a longer time.

This first step in the conversion of alcohol to carbon dioxide and water is called the "rate limiting step" because it is the slowest of the entire sequence of reactions involved. The other reactions proceed much more rapidly. Thus if one could increase the speed of conversion of alcohol to acetaldehyde in the liver, one could increase the rate at which alcohol is lost from the body as a whole.

It is fortunate that the acetaldehyde that is formed as a result of the oxidation of alcohol is oxidized very rapidly inasmuch as it is quite a toxic substance and accumulation of large amounts would be deleterious. In certain circumstances, such as that in which alcohol is consumed following ingestion of the drug disulfiram, the oxidation of acetaldehyde is inhibited. Acetaldehyde tends to accumulate, and the person ingesting the alcohol experiences a series of most unpleasant symptoms. The relative toxicity of alcohol and acetaldehyde can be shown by the fact that blood alcohol levels of 0.5 to 0.9 per cent are lethal, while levels of only .05 per cent of acetaldehyde are lethal. Normally only very small quantities of acetaldehyde can be found in the circulation during the oxidation of alcohol.

The enzyme believed to be mainly involved in the conversion of alcohol to acetaldehyde is known as alcohol dehydrogenase. For its activity it requires a cofactor known as diphosphopyridinenucleotide or DPN. It is the DPN that accepts hydrogen atoms from the alcohol converting the latter to acetaldehyde and, in turn, being converted to reduced DPN or DPNH. The conversion of DPN to DPNH during the oxidation of alcohol is believed to be quite important in leading to other biochemical changes, especially in the liver. A second enzyme that may be involved in the oxidation of alcohol to acetaldehyde is known as catalase. It is not entirely clear to what extent this enzyme is important in carrying out the above reaction in relation to the

(Continued on page 10)

A feature designed to help you keep posted on developments in the field of alcoholism.

PUBLIC HEALTH MEETING: North Carolina's Commissioner of Mental Health, Dr. Eugene A. Hargrove, will speak at the 37th annual meeting of the Southern Branch of the American Public Health Association to be held in Oklahoma City, Oklahoma, May 21-23. He will participate in a panel discussion on "Programing for Alcoholism" and talk about the alcoholism program developed in North Carolina. Others on the panel will discuss alcoholism programs in Oklahoma, the District of Columbia and Atlanta, Georgia. There will also be a speaker on the legal side of alcoholism. Dr. John Gales, assistant director of the Oklahoma City-County Health Department will moderate the panel. The meeting is expected to attract public health workers from 16 states and the District of Columbia. Its theme will be "Seventies—Decade for Decision."

METHODIST CHANGE "OFFICIAL" POSITION: As of the Dallas General Conference (1968), total abstinence is no longer the "required" position of the 11-million-member United Methodist Church. The United Methodist Church has abolished its written law prohibiting ministers from smoking and drinking. Past restrictions against laymen drinking are omitted in a new discipline. (Laymen have never been barred from smoking). The church's legislative proscriptions against alcohol, although frequently revised, had dated from the prohibition movement near the turn of the century. Of course, the denomination, with its stress on personal virtues, has opposed strong drink since its founding in America in 1874, although many of its early members and preachers drank.

Leaders said that the shift in the new policy was from the narrow "letter" to the fuller "spirit" of self-discipline, in accord with the gospel. After two sessions of debate on the issue, delegates to the church's governing conference overwhelmingly approved the new ministerial requirements, omitting the specific pledge not to use tobacco or alcohol.

An interpretive footnote said that the change was "not to be interpreted as relaxing the traditional view concerning the use of tobacco and alcohol," but as setting "higher standards of self-discipline and habit formation" and "dimensions of moral commitment that go far beyond any specific practices." (From the **NCI Catalyst)**

EDITOR'S NOTE: The two experiments referred to in "The Relevance of Basic Research" (Oct.-Dec., 1968) were conducted by: 1) Israel, Y. and Kalant, H., "Effect of Ethanol on the Transport of Sodium in Frog-Skin," **Nature,** Vol. 200, No. 4905, 1963; and 2) Gibbins, R. J., Kalant, H., and Le Blanc, A. E., "A Technique for Accurate Measurement of Moderate Degrees of Alcohol Intoxication in Small Animals," **The Journal of Pharmacology and Experimental Therapeutics,** Vol. 159, No. 1, 1968.

ORIENTATION PROGRAM: The Georgian Clinic has announced the continuation of its one week orientation program entitled, "Introduction to the Attitudes and and Techniques Useful in Rehabilitation of the Chronic Alcoholic." Excluding the week of May 19, 1969, the course will be offered April 14 through June 16, 1969. It is for professional workers currently employed in the fields of public health, mental health, vocational rehabilitation, alcoholic rehabilitation and welfare. There is no restriction on the locality from which the trainees may apply.

The tuition fee is $177.25; and room and board at the clinic for the week is $50.00. Scholarships for tuition and/or stipends for room and board are available for professionals with the exception of Federal employees. The participant or his sponsoring organization must provide travel costs. Those who are not eligible for scholarship and/or stipend may apply for funds through Public Health Act 85-507 at the following address: Training Resources Branch, Division of Community Health Services, Public Health Service, Department of Health, Education and Welfare, Washington, D. C. 20201. For applications or further information, please call or write: Mrs. Sally Mellen, Training Coordinator, The Georgian Clinic, 1260 Briarcliff Road, N. E., Atlanta, Georgia 30306; Telephone, 873-5341 (Area Code 404).

NEW YORK CITY: The American Medical Society on Alcoholism will meet June 12 at 8:30 p.m. in the Winston Conference Room, Roosevelt Hospital, 428 West 59th Street, New York City. The guest speaker will be Nancy Mello, Ph.D. of St. Elizabeth's Hospital, Washington, D. C. She will speak on "Behavioral Studies in Alcoholism."

ALUMNI INSTITUTE: The triennial refresher course for alumni of The Summer School of Alcohol Studies of the Center of Alcohol Studies, Rutgers University, in cooperation with the University Extension Division, will be held July 20-24, 1969 at New Brunswick, N. Y. Each day will be opened by one or two presentations by highly qualified speakers to be followed by questions and answers from the audience. In the afternoon, discussion of the day's subject will continue in mixed, interdisciplinary groups. Then, the entire group will reconvene for a lively follow-up session with the speaker or speakers of the day. "Subjects of the Day" include "The Alcohol Problems Field—Yesterday, Today, and Tomorrow," "Toward the Nonpunitive Management of Public Drunkenness Offenders," "The Public Information Gap," and "The 1969 Report of the 'Task Force on Alcoholism' of the National Council of Churches." The opening session July 20 will consist of a buffet supper followed by a report from Selden D. Bacon, Ph.D. on "The Center Today." The cost is $85.00 including tuition, room and meals.

GREENVILLE, N. C.: Dr. Robert Gordon Bell, director of the Donwood Foundation Research Center, Toronto, Canada and noted lecturer, will speak at a luncheon meeting of the Pitt County Alcohol Information and Service Center May 12, according to Mrs. Helen Barrett, director of the center. To be held at the Greenville Golf and Country Club, the luncheon will begin at 12:00 noon. Dr. Bell, since 1946, has been engaged in the treatment of alcoholism and other addictions. He has served as honorary consultant to the Malvern Institute for Psychiatric and Alcoholic Studies and was an outstanding participant in the International Congress on Alcohol and Alcoholism held last fall in Washington, D. C. "Due to his world traveling and professional experience," Mrs. Barret said, "his lecture should be an exciting blend of international savior faire and personal concern."

importance of alcohol dehydrogenase.

The acetaldehyde that is formed is rapidly converted to the compound acetylcoenzyme A or acetylCoA. Most people believe that the acetaldehyde is first converted to acetic acid, and that the latter is then converted to acetylCoA. However, there is substantial evidence to indicate that a good portion of the acetaldehyde may be transformed into acetylCoA by a more direct route. At any rate, the oxidation of acetaldehyde also occurs predominantly in the liver, and there are a number of enzymes present in the liver that are capable of oxidizing acetaldehyde to acetate. The most important of these are probably aldehyde dehydrogenase, which also requires DPN as a cofactor, and aldehyde oxidase, which utilizes oxygen directly to oxidize the acetaldehyde.

Once the acetylCoA is formed, it can enter the bloodstream and be further oxidized in many tissues by a series of enzymes, constituting what is called the Krebs Cycle, to carbon dioxide and water with the release of considerable quantities of energy which are largely trapped in high energy bonds of the substance adenosine triphosphate or ATP. The energy in the ATP can then be utilized by the body for various purposes as already mentioned. There are a number of substances other than alcohol that are oxidized to acetylCoA in the body. Among these are fatty acids, the sugar glucose, and amino acids from proteins. This means that once acetylCoA is formed from alcohol, it mixes with the general body pool of acetylCoA, and one molecule of acetylCoA cannot be distinguished from the other—unless the substance of origin was labelled with a radioactive isotope before being ingested or administered.

The energy yielded as a result of the oxidation of alcohol is considerable. Thus, in terms of calories of energy, one gram of fat—when burned—yields 9 calories; a gram of alcohol yields 7; while a gram of either carbohydrate or protein produces only 4 calories. There are some practical consequences of this energy yield. The chronic alcoholic, for example, may obtain a larger part of his daily calorie supply from alcohol. Thus, one pint of whiskey will supply him with 1400 calories. Unfortunately, unlike the situation with other more normal foodstuffs, the calories supplied by alcohol are not accompanied by essential amino acids, vitamins, minerals and fatty acids that the body requires. As a consequence, the alcoholic often slides into a state of nutritional deficiency and exhibits the symptoms of such deficiency.

Alcohol supplies calorie

Another point to be made with respect to the energy supplied by alcohol is that persons on specific diets who are watching their weights must realize that alcohol, along with all the other elements of the diet, supplies calories and can be fattening. Such calories must be added to those provided by the normal foodstuffs in calculating total caloric intake.

There is one observation that has been made by several investigators over a period of years that relates to the energy supplied by alcohol which has not yet been clearly explained. If an animal is provided with a complete diet but a number of calories normally provided by a given quantity of fat or carbohydrate is now provided by the calculated amount of alcohol, that animal will not grow as rapidly as if the same number of calories were provided by

but not the other elements that normal foodstuffs provide.

the fat or carbohydrate. It may be that some of the energy is lost as heat when alcohol is administered since alcohol does cause vasodilation and hence increased loss of body heat. Or it may be that some of the calories provided by alcohol are not converted as efficiently into high energy bonds as is the case with fat and carbohydrate—and a greater portion of energy is liberated as heat.

Transformation into Other Body Constituents. Some of the alcohol that is ingested before, or besides, being burned to carbon dioxide and water, is converted to a number of other metabolites. This is mainly accomplished via the acetylCoA that is formed as an intermediate. Thus the acetylCoA may be synthesized into fatty acids, cholesterol, acetoacetic acid or be used in the acetylation of various compounds. Thus alcohol can be fattening in the sense that a) it can be converted to a small degree to fatty substances such as triglycerides and cholesterol, and b) by being burned, it spares other substances such as carbohydrate and fatty acids from being oxidized and permits the latter to remain in the body, perhaps stored as fat.

Excretion of Alcohol. It has been mentioned that one to ten per cent of the alcohol ingested is excreted. Most of this alcohol is excreted into the urine. The alcohol in the urine of the renal tubules is in equilibrium with the alcohol in the blood passing through the kidneys. Hence it is possible by measuring the concentration of alcohol in the urine to assess the concentration of alcohol that is present in the blood. In a similar fashion, the alcohol in the aveolar air of the lungs is in equilibrium with that in the blood passing thru the lungs, and hence by determining the alcohol content of the expired air, an intelligent judgment can be made as to the blood alcohol content. The concentration of alcohol in the blood is actually about ten per cent less than that in the urine, and the ratio of alcohol concentration in the blood to that of the expired air is about 2000 to one. Determination of alcohol concentrations in the blood, urine or expired air may be made by legal authorities in order, for example, to assess the state of intoxication of a person who may be involved in an automobile accident, since such concentrations reflect the concentration of alcohol in the brain and therefore the behavior of the individual.

Rate of Removal of Alcohol from the Body. Alcohol that is ingested is absorbed into the body fairly rapidly but is eliminated much more slowly over a matter of many hours. The rate of removal of alcohol from the bodies of animals and men has been studied extensively over a long period of time. The general consensus is that the rate of disappearance of alcohol is quite constant, regardless of the quantity consumed above a certain minimal amount. Some investigators have reported deviations from this straight line relationship, but in general an approximate constancy in rate of removal does occur.

In man, for example, 7 to 14 grams of alcohol are lost, mainly by burning, from the body each hour. The rate varies from individual to individual and, sometimes, even in the same individual at different times. The above figures mean that about 9

to 18 ml of alcohol, or 18 to 36 ml of whisky (50 per cent alcohol) disappear from the body each hour. Roughly, since 29.6 ml equals one ounce, a man can oxidize about an ounce of whisky each hour. Obviously, if the intake of the alcoholic liquor such as whisky is greater than an ounce per hour, the excess remains in the body and serves to cause intoxication. Theoretically, if a person would sip whisky at the rate of an ounce an hour, the rate of removal could keep pace with the rate of intake, and he would never become intoxicated.

Since people are wont to imbibe larger quantities of liquor than those mentioned, they do become inebriated, and the phsyician is often faced with the task of trying to sober up a severely intoxicated person. It would therefore be of considerable help to have available a substance or substances which, when administered, speeded up the rate of alcohol oxidation and therefore of removal.

Throughout the years investigators and clinicians have reported a number of substances allegedly capable of accomplishing this. Other equally competent investigators and clinicians have reported experiments denying these possibilities. Among the substances mentioned have been glucose, insulin, glucose plus insulin, pyruvate, alanine, fructose, various vitamins, triiodothyronine and DPN.

In the case of pyruvic acid, or the amino acid alanine which is converted to pyruvic acid in the body, a biochemical rationale exists for such an effect. As has been mentioned, during the oxidation of alcohol, DPN is reduced to DPNH. In some people, the rate of alcohol oxidation may be limited by the supply of oxidized DPN. When pyruvic acid is reduced to lactic acid in the body, reduced DPNH is reoxidized to DPN, which can again be utilized in the oxidation of alcohol. Hence pyruvate and substances that can be converted to pyruvate may serve to provide an increased supply of oxidized DPN.

In general it has been found that the rate of oxidation of alcohol in any species has a certain maximum value for that species, and that when the rate of oxidation of alcohol in certain members of that species is below that maximum, it may be possible to increase the rate to that maximum level. This, of course, implies that even at best the degree to which the rate of oxidation of alcohol can be speeded up is very limited. This indeed has been the general observation of physicians dealing with severely intoxicated individuals.

Some Things Are Certain

It ought to be said that there are some things of which we are quite certain. Among these is that exercise, exposure to cold or administration of the thyroid hormone thyroxine will not increase the rate of removal of alcohol in vivo. Neither will coffee or caffeine. The latter may act as a central nervous system stimulant, offsetting some of the depressant action of alcohol, but they do not increase the rate of oxidation of alcohol. And finally, there is reasonable evidence to indicate that diabetic animals or persons may oxidize alcohol more slowly than normal animals and people.

Editor's Note: This concludes Part I of Dr. Mallov's lecture on the "Pharmacology of Alcohol" in which he has considered the action of the body on alcohol or, to say it another way, the "Metabolism of Alcohol." Part II, on what alcohol does to the body, will be presented in the next issue of *Inventory* under the subhead "Pharmacological and Pathological Effects of Alcohol."

Calling something a disease or disorder before it actually becomes one may help to make it come true.

INDUSTRIAL ALCOHOLISM AND THE STRATEGY OF CONSTRUCTIVE COERCION

BY HARRISON M. TRICE, Ph.D.

ONE of the outstanding events in the history of professional attention to the problems of alcohol use has been the definition of alcoholism as a medical problem. The effects of this re-definition had been looked upon as positive by most professionals, the most obvious impact being that alcoholics are now committed to hospitals and treatment centers rather than being incarcerated in prisons and other forms of criminal institutions. Medical treatment is obviously a more humane reaction to a behavior pattern that may not be basically anti-social or criminal.

However, in a complex way, it can be argued that the medical conception of the disease of alcoholism has not been without its adverse consequences. Moreover, the increasing emphasis upon the use of medical definitions of alcohol-related behavior may actually lead to an increase of these problems, at least in statistical terms. The concerns of this presentation are (1) the possible consequences of the use of the medical model in terms of social and psychological dynamics and (2) the explication of a model of preventive intervention which is based in the work world and which operates from a knowledge of the possible consequences of the use of the medical model.

Lest there be a misunderstanding about the position taken here, we emphasize heavily at the outset that the disease concept of alcoholism is not to be repudiated here. Research has definitively shown that the long-term intake of large amounts of alcohol may have pathological effects on the human organism; likewise, the pattern of physiological addiction which is seen at later stages of the alcoholism syndrome may be viewed in and of itself as a major symptom of disease. Thus, we subscribe to the impirical fact that the chronic abuse of alcohol may have organic illness as one of its consequences. However, being sociological in orientation, the primary concern of this presentation is the nature and consequences of social labelling processes rather than the nature and consequences of alcohol ingestion processes.

The use of the medical definition of alcoholism may result in persons being placed in "sick roles" at a time previous to the point where they actually had lost control of their drinking behavior. When a person is placed in a sick role and told that he is "ill", his deviant drinking pat-

Dr. Trice is a professor in the School of Industrial and Labor Relations at Cornell University, Ithaca, N. Y. His article was a distinguished lecture of the 1968 John W. Umstead Series of Distingushed Lectures sponsored by the N. C. Department of Mental Health. It was co-authored by Paul M. Roman, research associate at Cornell University.

terns may be legitimized and perhaps even perpetuated. Assignment to the sick role comes about as a consequence of being labelled by a physician as manifesting illness. The legitimization of deviant drinking patterns comes about because these behaviors are labelled as the results of pathology rather than as being inappropriate forms of behavior. In our society, the sick role is characterized by the fact that the individual is not held responsible for his illness; thus, in this case the illness was abnormal drinking behavior and assignment to the sick role removes the individual's responsibility for engaging in this form of deviance.

A second consequence of medical labelling in addition to assignment to the sick roll may be a change in the individual self concept as well as changes in the social definition of him which is held by the significant others in his social life space. The individual with the medcal diagnosis of alcoholism or problem drinking occupies a social status which has attached to it role expectations, the principal expectation being engagement in deviant drinking practices. The efficacy of the labelling process is increased by the fact that it is carried out by the physician, who is a highly respected social functionary whose authority is rarely questioned. The end of the medical labelling process may be a structure of role expectations and self concept changes which may eventuate in the individual's actual performance of the deviant role. The individual is told that he is a sick person whose illness is manifest in alcohol abuse. He begins to see himself as fitting this description and thus carries out behavior appropriate to this description.

There may be other consequences of the labelling process which fall upon sick role assignment and self concept changes. First, the individual may be rejected from his primary group associations in which he receives need for fulfillment. This rejection comes about as a result of the others feeling social distance from him because of his label of a deviant as well as the inability to tolerate the consequences of his abnormal drinking behavior. Thus the developing alcoholic may seek out opportunity to affiliate with more tolerant drinking groups. The seeking of these affiliations is made easy by the fact of his change in self concept, and the affiliation with these new groups likewise would further imbed the personal identification as a deviant drinker. The norms of the drinking groups with which he associates may call for aberrant drinking behavior as a means of establishing status and prestige in the group.

Rather than finding himself in a group of well-developed alcoholics, the individual who has been assigned the sick role and who has had the self concept changes which resulted from the medical labelling may find himself in a social group which is composed primarily of non-deviants. There is a growing amount of research evidence which shows that potentially unstable social groups may be stabilized by the presence of a deviant member. It is possible for the group to do its own labelling of a selected deviant, but labelling will be much more effective, both for the group and for the individual who is being labelled, if the labelling is executed by an outsider who has the institutionalized assignment to label and whose authority is not questioned by the labelled individual or by the group. The presence of a formally and officially labelled deviant assures that it is not necessary to "pass the deviant role around" among the members in order to hold the group

together. A deviant can serve several functions in an unstable group.

First, his presence may define the other group members as "normal" because they do not share the deviant's symptoms or his label. This type of reference definition may be particularly valuable for those who are not certain of the normality of their unbehavior.

Secondly, an individual who is a labelled deviant and who has been placed in the sick role may be seen as something less than a "whole person" and thereby may provide a submissive and relatively helpless target for scapegoating. This in turn allows for the displacement of inner-member tensions and anxieties onto the weak deviant member. This type of projected hostility reduces cross-cutting interpersonal conflicts which could potentially weaken the organization of the group.

Third Function

A third function served by the presence of a deviant group member is that it may offer the group a readily available excuse if it fails to attain its stated goal. In other words, rather than blaming themselves and their own inefficiencies for failing to attain a certain goal, the group members may easily blame their failings on the fact that they have had to put up with a deviant group member.

The overall consequences of these functions may be that the individual is essentially "forced" to play the role of a deviant and is thereby pushed further along the road of true alcoholism development. All of these consequences may be seen as stemming from the initial medical definition of his problem. Again, we reiterate our assumption that these problems are generated in situations where medical labelling occurs prior to the development of true addiction in the sense of loss of individual self control, and we also assume that initial attempts of treatment are ineffective with the individual for the same reason, namely that he was not suffering from a form of pathology which could be treated.

Our overarching point is that the use of the disease label may have disease consequences. We are not arguing that chronic alcoholism is behavioral deviance, for as we said before, protracted heavy drinking has disease consequences in terms of physiological damage as well in terms of physiological and psychological addiction. The point is that the use of the medical model conception of deviant drinking behavior may lead to processes of sick role assignment and labelling at a point previous to true addiction.

This will not seem so damaging at first blush, but if one evaluates the possible changes in self concept that can result from this labelling as well as the fact that an individual who is labelled previous to the point of truly developing a disorder will be resistant to treatment for the simple reason that there is very little to treat. The goal of all of our efforts in this field is the prevention of alcoholism. Thus it seems feasible to argue that we should be reluctant to label all forms of deviant drinking behavior as results of pathology. It seems well within our traditions to emphasize individual responsibility for behavior as long as that individual responsibility can actually be carried out.

We are acquainted with certain procedures of medical referral in industrial organizations which may serve to "lock in" deviant behavior in a manner outlined above. These programs emphasize early identification of a deviant drinker, but their emphasis is not upon his deviant

(Continued on page 18)

North Carolina College

East Carolina

1969 N. C. SUMMER SCHOOL COURSES ON ALCOHOLISM

THREE summer school courses, co-sponsored by the colleges or universities and the Division of Education, N. C. Department of Mental Health will be conducted this year. They are:

Alcoholism Health Education, East Carolina University, Greenville, June 10-20. This course is designed primarily for teachers and prospective teachers. Its content will include sessions on the nature and extent of alcohol problems, physiology and metabolism of alcohol, personality development, alcoholism, community resources for helping alcoholics, prevention and alcohol education in the schools.

Family Life Elucation Workshop, North Carolina College, Durham, June 16-20. This course will be limited to persons from seven counties—Durham, Caswell, Stokes, Surry, Yadkin, Granville and Chatham. An attempt will be made to secure teams of five people from each of these counties who are representative of lay or professional people who either work with, or have an interest in, youth and young adults. Examples are PTA members, 4-H Club workers, boy scout and girl scout leaders, caseworkers, public health nurses, agricultural extension workers, clergymen and police officers. The emphasis will be on family life material, discussion of local problems and leadership training. Ideally, those who attend will go back to their communities and initiate some community action.

Summer School of Alcohol Studies,

UNC — 1968

Ministers

Department of Corrections

iversity—1968

St. Andrews Presbyterian College, Laurinburg, June 22-27. Three days of this course will be spent on a day-time lecture series covering alcoholism as a social health problem, the illness of alcoholism, and alcohol as the agent of the illness. In addition there will be evening lectures on the Department of Corrections Alcohol Program, Coordinating Alcoholism Services and Health Education Principles in Alcoholism. Two days will be devloted to four section meetings, to be held simultaneously, in which the student can select the topic of his choice. This course is designed to benefit interested people from various disciplines as illustrated by the group pictures from the 1968 session at UNC shown here.

Social Workers

Local Councils on Alcoholism

Local Law Enforcement

Above, N. C. Department of Mental Health;
Below, Vocational Rehabilitation.

Public Health

drinking but upon his "developing alcoholism." The immediate step following identification is very often referred to a medical department or some other treatment agency—in other words, labelling. We would argue that mere referral to a physician or referral to a treatment agency such as Alcoholics Anonymous is a form of labelling, in terms of changing the individual self-concept by teling him that he needs some form of extraordinary help to overcome his behavioral problems. Thus, even though he may not be formally labelled as an alcoholic, he and those in his social environment are "told" that his drinking has led him to require medical attention. In any event, it appears that *the stage may be set* for a progression toward true addiction in the sense of sick role occupancy and role expectations which may lead to a "self-fulfilling prophesy."

In light of this set of ideas regarding the potential outcome of the use of medical labels, an attempt has been made to develop a model of intervention which is based upon early identification of deviant drinking but which avoids as much as possible the risk-laden use of medical labelling processes. In light of knowledge that the early stage alcoholic or deviant drinker may be unable or extremely reluctant to recognize his difficulties, we have asked the question of what societal system possesses the institutionalized and legitimate authority to bring effective pressure to bear upon him in such a way that his behavior may be ceased. The answer appears to be that this authority rests with the employer. The job is a system of exchanges between the employer and the employee in which rewards are given for a certain kind of performance. If this performance is inappropriate or inadequate, rewards may be legitimately withdrawn. This scheme of intervention is based upon this system of exchange. For want of a better term, the scheme is labelled "constructive coercion."

Constructive coercion in its most ideal form is a confrontation of any employee who shows evidence of drinking on the job or comes to work with a hangover. This is not only the early identification of alcoholics, but it covers a much broader group. It is the early, early identification of problem drinkers. It is a total intolerance of drinking or hangovers when the individual is supposed to be performing his work role. The early stage alcoholic is included under this umbrella as well as those whose drinking may never eventuate into this type of problem.

Ideal Confrontation

The ideal confrontation of the employee who allows alcohol to enter in any way into his work role is carried out by the first-line supervisor. This confrontation basically involves a simple statement that repetition of this act will lead to termination of employment. If the identification program is successful, it will not be necessary to refer individuals to the medical department or to introduce them into therapy because the behavior will still be under individual control if confrontation occurs at this early point. In other words, we assume that a "hard line" approach such as this will result in the identification of deviant drinkers at a point previous to the occurrence of alcoholism. It appears that in order for a true "loss of control" to occur, the individual must allow alcohol to interfere in some way with his job performance at many points.

This confrontation is not based upon the interference of alcohol with

job performance but rather is a universalistic norm against alcohol use in the work place or the presence of hangover. The arbitrary decision of "how much" drinking actually interferes with job performance seems to offer many difficulties, but particularly in training first-line supervisors about when it is appropriate to "confront" an employee who is a problem drinker. Likewise, the notion that certain jobs have built into them a compatibility with alcohol use seems to lead in the same direction of arbitrary decisions, foggy policies, and the risk inequity.

We state this as the ideal approach, but it is obvious that there will be many occasions upon which individuals who are in the early stages of alcoholism are either inadvertently hired by the organization or manage to conceal their behavior in such a way that they are not discovered until they are well into the alcoholism progression. For these individuals the strategy is basically the same, only the "threat" contained within the confrontation is based upon the individual's willingness to enter into treatment rather than upon his self-volitional control of his drinking behavior. These individuals are essentialy told that if they do not enter treatment and thereby do something about their problem, they will lose their employment. In this case, it is obvious that medical labelling is necessary, but the presence of a true need for treatment increases the relevence of this referral and thereby cuts down on the risks outlined previously.

There are several factors which may temper the success of the constructive coercion approach.

First, if an individual does not have obligations of a family breadwinner or is not responsive to such obligations the effectiveness of the confrontation may be reduced by the simple fact that the individual will be willing to give up his employment in order to continue drinking.

Second, it is assumed that any individual will have an investment in his job such that quitting and obtaining other employment in order to maintain his drinking may be too costly in terms of time, training, and personal benefits which have accrued in his present position.

Third, it is assumed that there will be supervisory positions above an individual in the organizational hierarchy which possess adequate authority and power to carry out the strategy of constructive coercion. The technique may not be effective for those in executive positions or in small organizations which do not have role defined status hierarchies.

Fourth, it is assumed that the supervisor will be able to overcome the manipulative skills of the developing alcoholic employee who attempts to deny his deviant behavior.

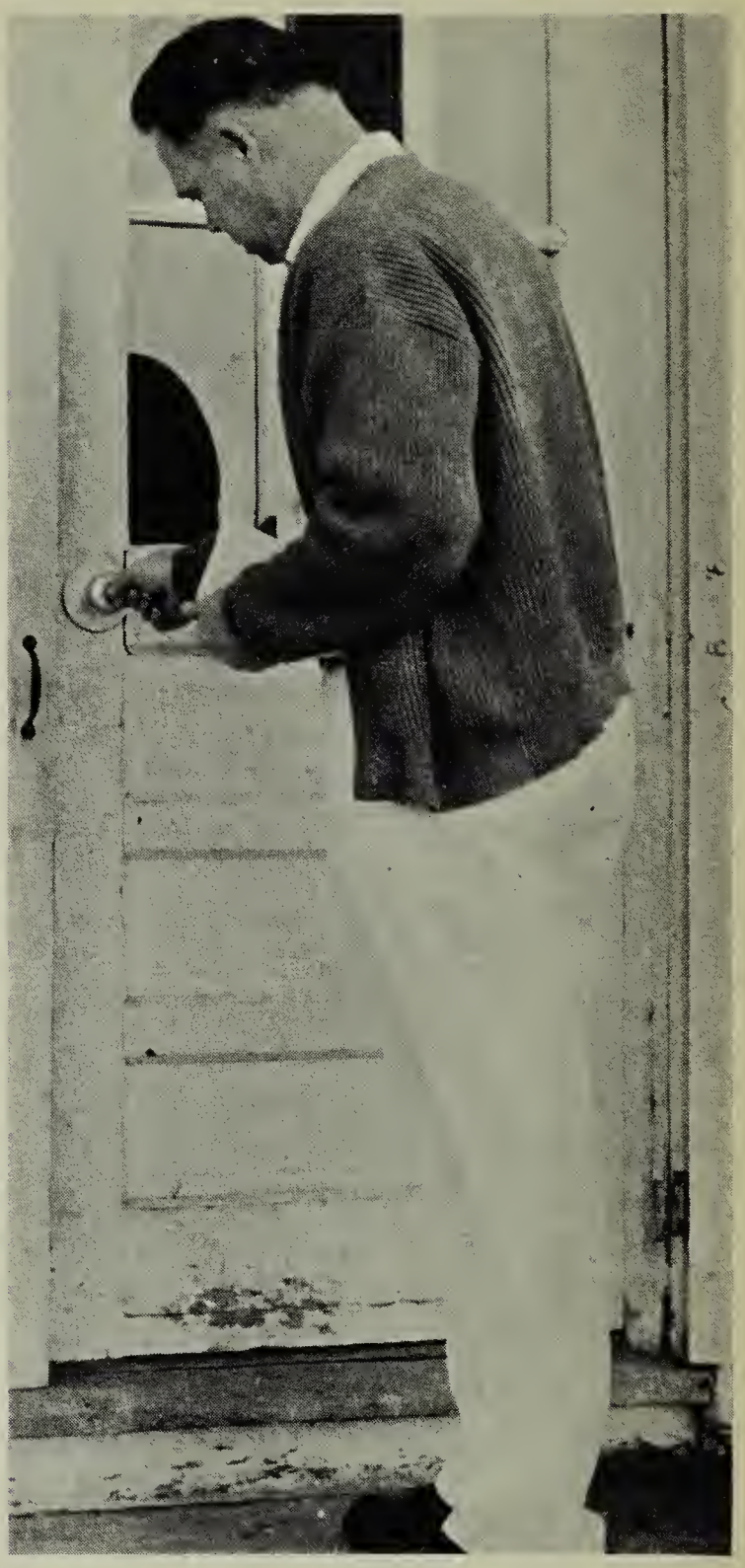
In summary, we have argued that the disease model of alcoholism and problem drinking has resulted in the overuse of labelling processes which in and of themselves may set the stage for the development of true alcohol addiction. The wisespread use of labelling problem drinking as a medical condition may possibly contribute to eventual addiction rather than reducing its occurrence. We have presented a scheme of intervention which is based in the industrial work place and which operates off several assumptions concerning the individual's control over his own behavior at certain early points in his deviant pattern as well as the fact that the employer possesses a legitimate right to intervene and essentially "do something" about deviant drinking before it develops into a full-blown medical problem.

The "New" ARC at Butner

THE Alcoholic Rehabilitation Center at Butner made a "cinderella" move in February when its staff and patients transferred from 406 Central Avenue to its new location and facilities nearby.

The old building—home of the ARC for almost 19 years—is an army-barracks type "temporary" building built at "Camp Butner" during World War II. Sadly in need of structural and decorative repairs, its appearance can be described as "dreary" at best.

In contrast there are six modern brick and cinder block buildings at the new site. The complex consists of an administrative building, three dormitories, a therapy building and a cafeteria grouped around the edges of a pine grove. Concrete sidewalks connect the buildings.



Leaving the "old" center behind.

Staff members on their way to the new ARC bid the old ARC a smiling farewell. They are (left to right): Dr. Peter Holden, medical director; Bill Latham, business manager; Mrs. and Mr. Keith, head attendants; and Roberta Lytle, psychiatric social worker.

A patient boards the bus for the short ride to the new center.

The new center can care for 90 patients, both male and female, compared with the old center's capacity of 54. The ratio of female to male patients is about one in five.

"Moving into our new facility has not changed our basic treatment methods, though there will be an expansion of programs and services," Dr. Peter Holden, medical director, said. "However we are experiencing a tremendous boost in the morale of both our patients and staff."

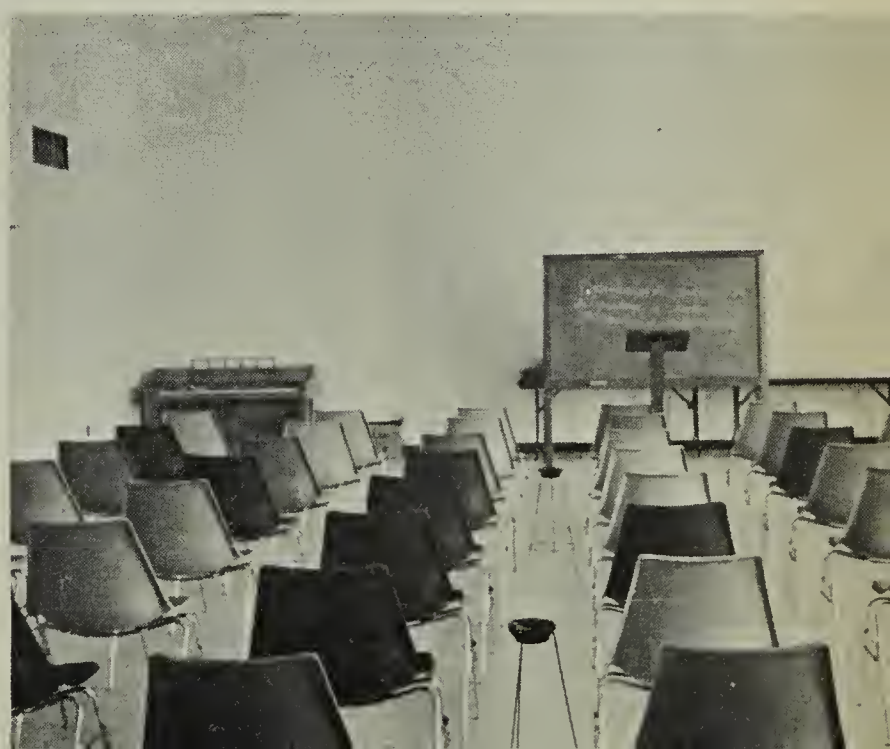
The staff is enjoying the advantage of better office and work space, while the patients are enjoying their greatly improved living quarters. Each dormitory has 30 beds in single and double rooms, its own kitchenette, snack area and lounge.

"We're all more comfortable with better heating and our first air conditioning," Dr. Holden said, "and of course with our own kitchen we are enjoying 'home-cooked' meals."

The new Butner facility is one of four regional alcoholic rehabilitation centers the Department of Mental Health hopes to have operating by the end of July. After having served for many years as the State's only "voluntary" treatment center for alcoholics, it will eventually serve only the north central region which is composed of Alamance, Caswell, Chatham, Durham, Forsyth, Granville, Guilford, Orange, Person, Rockingham, Stokes, Surry, Vance, Warren and Yadkin Counties.

A second ARC for the western region opened in March at Black Mountain, and a third which will serve the eastern region is almost completed at Greenville. The funds

The Therapy Building (left) is one of the six buildings that comprise the new ARC. One of its "inside" features is a large auditorium (right) which can be used for meetings or cleared for games, dances and other recreation.



to build these three were obtained from a "five cents a bottle" price increase on ABC store products added by the 1965 General Assembly, and operating funds were appropriated by the 1967 General Assembly. Funds to establish a fourth center at Dorothea Dix Hospital in Raleigh for the south central region will be requested of the 1969 General Assembly.

Group psychotherapy, a technique that has proved to be particularly effective in helping alcoholics recover, is the principal method of treatment at the ARC at Butner, according to Dr. Holden. Other therapies used are individual psychotherapy and medical treatment, including rest, good nutrition and vitamin supplements. In addition, the overall rehabilitative program offers vocational counseling, spiritual guidance, recreation, industrial and occupational therapy and the opportunity to learn about, and participate in, the fellowship of Alcoholics Anonymous. Finally, before his release, the patient is referred to an appropriate professional person or agency in his community for continued treatment.

The rules of admission are few and simple:

1) The patient must come voluntarily. He must be sober, and his physical and mental health should be good enough so that he can take part in the therapy program fairly soon after admission.

2) Individuals, agencies and professional people can make referrals by contacting the Admitting Officer (Tel: 919-985-6541) at Butner.

3) Regardless of who makes the initial contact, a recent statement from a doctor that includes a medical history and the results of a physical examination is required. A form for this purpose is available from the center. The form, when completed by the doctor, can either be mailed or the patient can bring it with him.

4) Both male and female patients are eligible.

5) If the patient has a serious mental illness, he cannot be accepted by the center and should be admitted directly to the regional psychiatric hospital. However, if the patient recovers from his mental illness, he may be transferred to the center on the recommendation of the staffs of the two facilities.

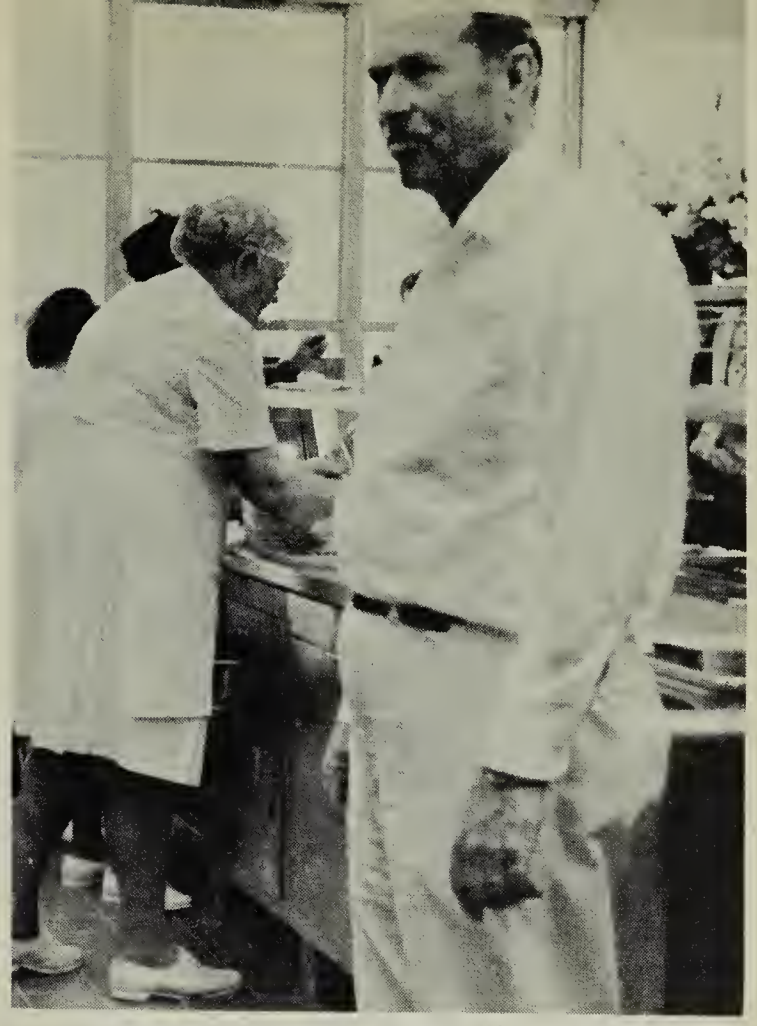
The ARC secretary known as Lou gets settled in her new quarters.

6) The fee is $7.00 per day for the four weeks (required length of stay) of treatment. It may be paid by cash or check at the time of admission, or by an agreement—signed by the patient at the time of admission—promising to pay the full sum at some time after discharge.

If a person is indigent he may obtain a letter stating this fact from his local county welfare agency and upon admission the request for payment will be deferred. The center does not refuse to admit any person because of lack of money, but feels that patients should take responsibility for the cost of their treatment if they are able to pay all or part at the time of admission or later. Each case is handled individually.

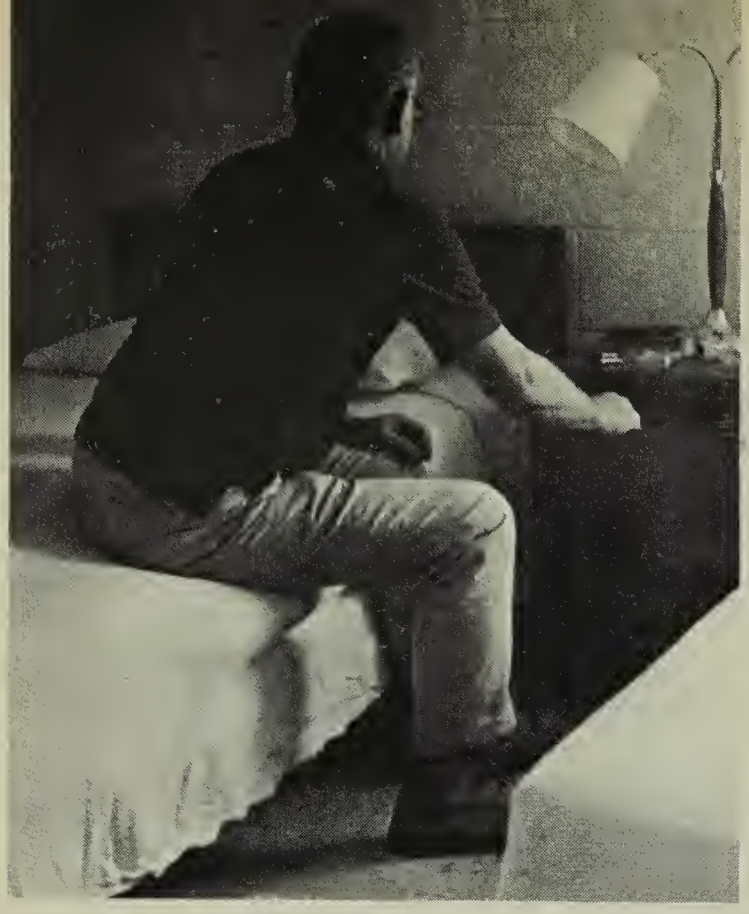
7) Patients are admitted by appointment five days a week, Monday through Friday. The hours are: between 9:00 a.m. and 12:00 noon and between 1:00 p.m. and 5:00 p.m. Appointments are obtained by contacting the Admitting Officer.

The program, treatment methods and rules of admission just described will apply generally to all the centers as they open, according to Dr. R. J. Blackley, director of the Division on Alcoholism of the N. C. Department of Mental Health. However, he said that policies and admission procedures will be reviewed after all the centers are operating and necessary changes, if any, made. "We anticipate, for instance, the possibility of two radical changes. They are, the acceptance of a few acute



Getting ready for the first meal.

Patients get in line for their first "home cooked" meal at the new ARC.



A patient almost has his bedroom in order after the move to the new ARC.

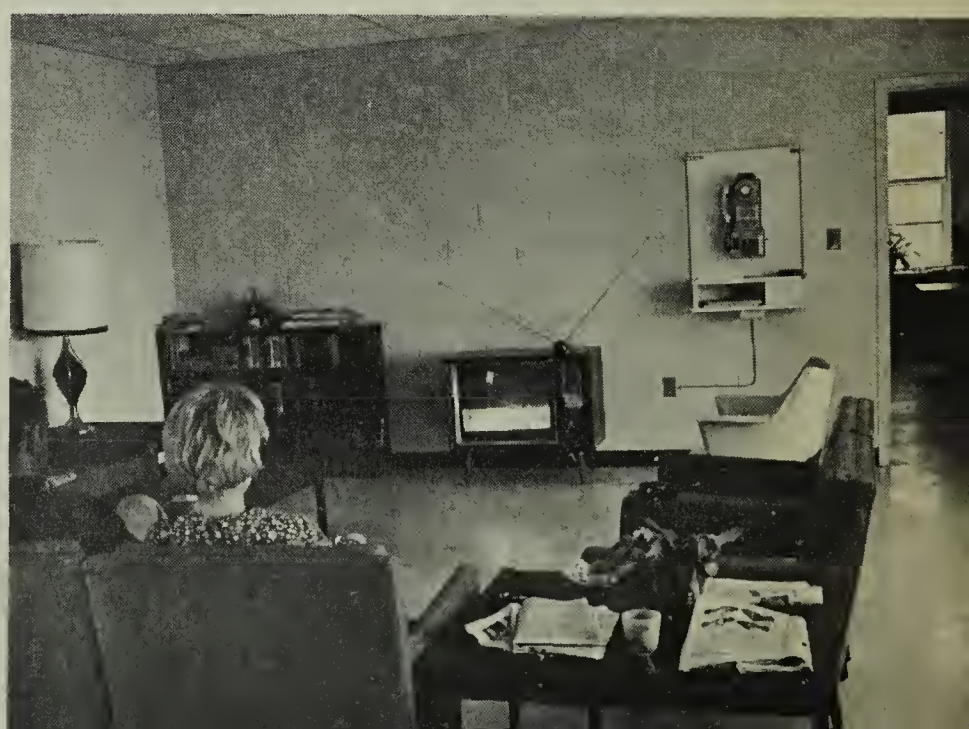
cases (not more than 10 at any one time) and the acceptance of 'committed' patients as well as voluntary patients. Both break with the traditional policies of the 'mother' ARC at Butner," he explained.

Inpatient treatment will be only one aspect of the four 90-100 bed medically-psychiatrically oriented centers' program as planned by the Department of Mental Health. As the centers become firmly established, and as sufficient staff is recruited, they will provide a screening and evaluation service. Each patient, after evaluation by a team consisting of a psychiatrist, social worker, psychologist and vocational counselor, may be: 1) entered into the inpatient therapy program at the center; 2) be referred to a source of treatment in his own community; or 3) be referred to a state hospital in cases where long-term treatment is indicated. Outpatient and day care programs will be developed. Greater emphasis will be put on basic and clinical research; also follow up of patients to determine the effectiveness of treatment.

In addition to the inservice training of its own staff, the centers will help train community alcoholism program workers and expand their cooperation in orientation programs to include teachers, probation and parole officers, police officers, sheriffs, industrial personnel and others. The ARC at Butner has conducted such programs with medical students, public health nurses, ministers, social workers, highway patrolmen, vocational rehabilitation counselors and probation officers.

Patients from 30 western counties are now being admitted at the ARC at Black Mountain. The ARC at Butner will continue to serve all other regions until their centers open.

The wastern counties are: Alexander, Alleghany, Ashe, Avery, Buncombe, Burke Caldwell, Catawba, Cherokee, Clay, Cleveland, Gaston, Graham, Haywood, Henderson, Iredell, Jackson, Lincoln, McDowell, Macon, Madison, Mecklenburg, Mitchell, Polk, Rutherford, Swain, Transylvania, Watauga, Wilkes and Yancey.



Patients relax in the lounge area of one of the three dormitories. Each dormitory has a telephone, TV and kitchenette (not shown) for making coffee and other snacks.

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ARTICLES AND FEATURES OF INTEREST ON ALCOHOL AND ALCOHOLISM

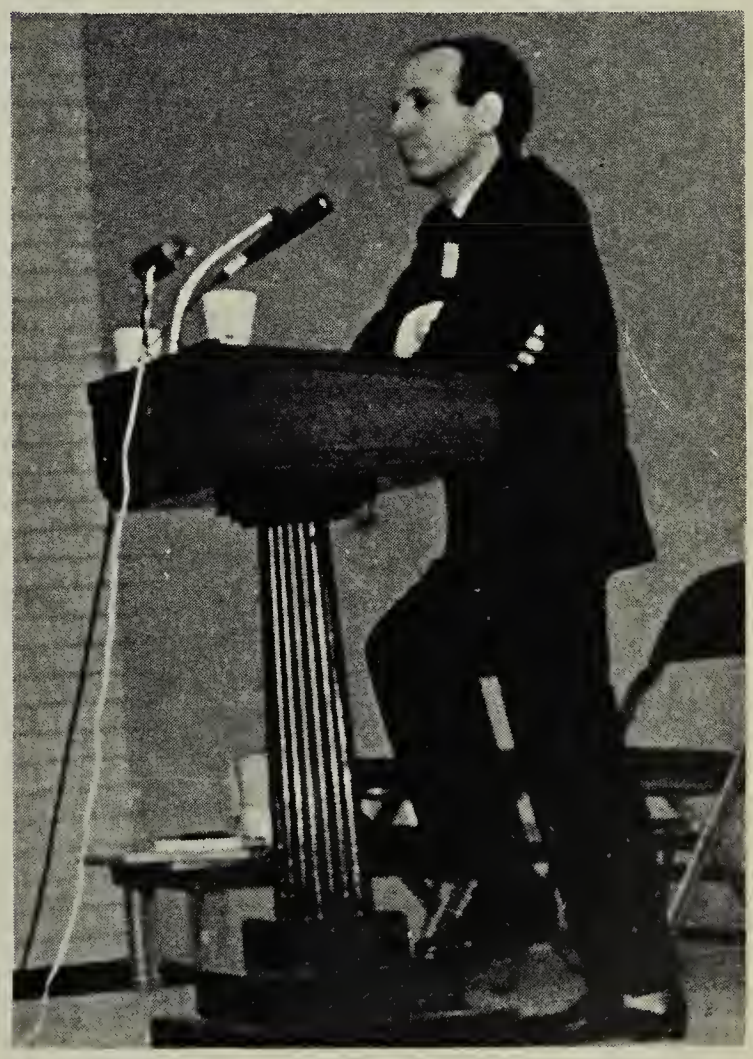
The fact that all Americans relate to alcohol problems in emotionally charged ways is a factor in the limited progress made.

A National Overview of Alcohol Problems: THEIR CONTROL AND PREVENTION

BY THOMAS F. A. PLAUT, Ph.D., M.P.H.

THE North Carolina Department of Mental Health and the co-sponsoring organizations are to be congratulated for having organized this series of lectures on alcoholism. These undoubtedly are the largest and most wide-reaching series of meetings on alcoholism that have ever been organized by a State mental health department anywhere in the United States. It is indicative of the leadership being provided in the field of alcoholism by (North Carolina) mental health workers and also—hopefully—is indicative of the fact that perhaps now in the late 1960's we are finally beginning to round the corner in securing for this area the attention it so badly requires.

One of the most striking characteristics of American approaches in this field has been the confusion—confusion in terms of feelings, in terms of attitudes, in terms of sources of action, and in terms of use of words. This last confusion is graphically illustrated by the fact that the first three presentations today all are mistitled in the printed program! Dr. Wilson's paper is listed as "Alcoholism and Brain Function," however, he actually talked about



Dr. Plaut is assistant chief of the National Center for Prevention and Control of Alcoholism, National Institute of Mental Health, Chevy Chase, Md. His article was a distinguished lecture in the 1968 Jonh W. Umstead Series of Distinguished Lectures sponsored by the N. C. Department of Mental Health.

"Alcohol and Brain Function!" Similarly, Judge Murtaugh's paper is listed as "Law and Alcoholism," however, his focus clearly was on "Alcohol (and Drunkenness) and the Law." Finally, the printed program indicates that my paper will deal with "Alcoholism Problems" while in actuality I will be talking about "Alcohol Problems." It may well be merely a coincidence that these "mistitlings" occurred, but they would appear to reflect some of the ambivalence, uncertainly and confusion that exists generally in American society about the whole topic of drinking (and abstaining), drunkenness, excessive drinking, alcoholism and other types of drinking problems.

To most Americans the term "alcohol problems" refers to alcoholism and other kinds of drinking behavior that repeatedly get individuals into difficulty, such as public drunkenness and the problems associated with drinking and driving. However, there are other "alcohol problems" which have frequently preoccupied segments of the total population. These include such matters as who should treat alcoholics, what the role of Alcoholics Anonymous should be, whether alcoholism should be viewed as a disease (or illness), as a symptom or as a social-behavioral problem. Still other segments of the population are most concerned about issues such as the relationship between alcohol and criminal behavior. But perhaps the most basic American "alcohol problem" has to do with how drinking itself is viewed. That is, is drinking seen as intrinsically bad, as intrinsically good or as essentially neutral.[1] Related to this very basic alcohol problem are other key problems such as what the minimum age should be for the sale of alcoholic beverage to minors, and whether or not alcoholic beverage should be permitted in dormitories on college campuses. On a similar level is the question of what should constitute a program of alcohol education for youngsters. Frequently also there has been controversy about the role of the advertising of alcoholic beverages in promoting the excessive use of alcohol—among adults as well as among youngsters. And, in this State of North Carolina, it is inconceivable to leave off any list of "alcohol problems" the marvelous social phenomena of "brown bagging"! (This refers to the practice in North Carolina of people bringing their own alcoholic beverages—usually in a brown paper bag —to restaurants which are not allowed to sell distilled spirits by the drink. This topic has been the subject of considerable controversy during recent years.)

It is abundantly clear that many of the alcohol problems or issues listed above are extremely emotionally charged. That is, Americans have very strong feelings on these issues. In a very important sense these deeply-felt feelings are a heritage of the temperance movement and the Prohibition experiment. It is important to recall that only one constitutional amendment has ever been repealed—the Prohibition Amendment —and further that the area of drinking behavior is the only specific area about which there have been two constitutional amendments. Attitudes about the appropriateness of drinking, of abstaining, and of drunkenness are a central element in our contemporary American culture and these attitudes must be understood in any efforts to cope with the abovementioned alcohol problems. There

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1/ See for example Roueche, Berton, *The Neutral Spirit: A Portrait of Alcohol,* Boston, Little, Brown, 1960 and Chafetz, Morris, *Liquor: The Servant of Man,* Boston, Little, Brown, 1963.

is good reason to believe that if the only Americans who drank alcoholic beverages were alcoholics themselves, we would be a lot further along in developing adequate services and treatment programs for these persons. The fact that all Americans—whether they drink or not—relate to this whole area in affect-laden ways, is a significant factor in the limited progress that has been made to date in this area.

The vast majority of adult Americans drink alcoholic beverages and only a small minority ever get into any difficulty because of their drinking. The bulk of American social drinkers get pleasure from their use

Dr. Plaut

of alcoholic beverages and have no problems in controlling their drinking. The very nature of their own subjective experience with alcohol—coupled with the cultural ambivalence regarding this topic and the often barely buried guilt—makes it more difficult for the social drinker to understand and be sympathetic with the drinking behavior of alcoholics. It is almost as though the average social drinker is saying "I can control my drinking, why can't he control his drinking." These beliefs that alcoholics could control their drinking if they only "set their mind to it" are a striking remnant of the earlier belief that there is something intrinsically sinful and wrong about all drinking. This notion that alcoholism is a "self-inflicted" illness, still is very pervasive in America—among professional workers as well as among laymen.

One useful distinction between different kinds of alcohol problems has been suggested by Selden Bacon.[2] He refers to as "primary problems" those difficulties or dilemmas resulting directly from the effect of alcohol on persons. This would include alcoholism, the added risk of motor vehicle accidents consequent upon the intake of alcohol, public drunkenness and other socially unacceptable behaviors directly attributable to the drinking of alcoholic beverages. "Secondary alcohol problems" are those related to feelings and behaviors about the drinking or nondrinking of alcoholic beverages and different conceptions as to how both primary and secondary alcohol problems should be handled. For example, a group of educators—or law enforcement officials—may argue vehemently about what kind of education, if any, should be given to youngsters about alcohol and this would certainly fall into the category of a "secondary alcohol problem."

Recent years have seen an increasing awareness of the total inadequacy of current American alcoholism treatment services. For example, as recently as 1964, two-thirds of the general hospitals in the United States indicated that they had policies against accepting alcoholics either for the acute problems attendant on excessive alcohol intake or for the treatment of the underlying drinking problem. While recent years, particularly with the expansion of psychiatric services in general hospitals, have seen some improvements in

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[2]/ Lecture presented at Rutgers Summer School of Alcohol Studies, July 1967.

this regard, the situation still remains a shameful one. Those general hospitals that have psychiatric wards are more likely to have nondiscriminatory policies towards alcoholics. In addition, the larger hospitals—generally situated in urban areas—are usually more willing to provide services at least for some alcoholics.

Although it can hardly be said that the psychiatric professions historically have provided substantial leadership in ensuring appropriate care and treatment for alcoholics, there have been a number of developments in recent years pointing to a far greater assumption of such responsibility on the part of mental health agencies and professions. For example, in a number of States, more men patients are now admitted to State mental hospitals with an alcoholic diagnosis than with any other diagnosis. And on a nationwide basis, over 20% of all men admitted to State mental hospitals are given an alcoholic diagnosis. This is not to say that the majority of mental hospitals have adequate treatment programs for alcoholics because this certainly is not the case. Only between 10 and 15% of the 286 State mental hospitals in the country have any specialized program for alcoholics. However, the number of such programs has increased substantially over the last decade and some of them are currently providing quite comprehensive treatment programs for large numbers of patients.

One of the most dramatic changes in the provision of psychiatric care has been the growth of psychiatric services in general hospitals. The number of patients admitted to the psychiatric wards of these hospitals exceeded admissions to mental hospitals for the first time in the year 1964. This trend towards greater reliance on community-based psychiatric services has continued over the last four years. (However, the bulk of days of patient care is still being provided through the State mental hospitals.) The proportion of admissions to psychiatric wards of general hospitals that are diagnosed as "alcoholics" is almost identical to the figure for State mental hospitals—about 22% of all men patients and 7% of all women. Unfortunately, the psychiatric wards of general hospitals only rarely have developed any treatment programs specifically directed at the needs of problem drinkers. As has been the case in the past with the mental hospitals, alcoholic patients tend to remain for relatively short periods of time and often much of the treatment is of a medical rather than behavioral nature. The crucial new element that has entered into psychiatric services in very recent years is the community mental health center program. This program will be discussed in some detail shortly.

The psychiatric professions are

Outpatient treatment services for alcoholics are probably in an even more rudimentary stage than inpatient services. Less than 5% of the more than one-half million patients seen in the over 2,000 general psychiatric clinics in the country are alcoholics. In one way or another many of the psychiatric clinics tend to discourage alcoholics from availing themselves of the treatment services they offer. In part this reflects the low priority attached to the provision of treatment for alcoholics by psychiatric agencies and in part it reflects the still prevalent view in many mental health—and other—circles that alcoholics are extremely

difficult to treat. Primarily through the efforts of State alcoholism programs—which now exist in over 40 of the States—well over 100 outpatient alcoholism clinics have been established throughout the country. These clinics, generally staffed with the same type of personnel as psychiatric clinics, usually are small in size and frequently are not open on a full-time basis. With a number of significant exceptions, they have tended to provide treatment primarily to lower middle class and middle class types of alcoholics. A major shortcoming of most of these alcoholism clinics is their relative isolation from other community helping agencies. Often they are not even in a position to work collaboratively with emergency wards of general hospitals where alcoholics appear for treatment of the acute effects of excessive alcohol intake or with the State mental hospitals that frequently provide a substantial number of days of care for alcoholics.

In an effort to bridge the gap between total institutional care—as is found in State mental hospitals—and independent living in the community which is the norm for patients in outpatient clinics, over one hundred halfway houses for alcoholics have been established in the United States. Recovered alcoholics have been the moving force behind the bulk of these halfway houses. Only a tiny fraction of these houses have any professionally trained personnel on their staff and frequently the only available "treatment" consists of Alcoholics Anonymous meetings. The conception of a halfway house is an extremely important and useful one, however, in the past many of the halfway houses have had extreme difficulty in maintaining themselves financially. If halfway houses are going to make the contribution which they potentially can, a more adequate financing system will have to be developed and radical changes will have to be made so that these facilities can participate more fully with other community agencies that are in a position to provide varying treatment and supportive services for alcoholics.

In summary, it can be said that the alcoholic still is a second class patient in virtually all American communities. This is most dramatically illustrated by the tendency for emergency medical services to be denied to these patients unless the condition is of a life threatening nature. Equally unfortunate, however, is the virtual absence of adequate inpatient treatment programs and any type of substantial outpatient service.

How can the obvious inadequacies of current treatment services be overcome? There now is substantial agreement that general community "helping agencies" will have to play a crucial role in overcoming the substantial gap between the needs of alcoholics and current availability of treatment services. For a variety of reasons, it is not realistic to expect that this improvement can occur through the establishment of a separate network of specialized services for alcoholics. The very magnitude of alcoholism and other types of drinking problems means that it would be logistically impossible to obtain adequate resources—in terms of personnel or funds—for any such network.

However, of even more importance is the fact that alcoholics rarely suffer only from difficulties with their drinking. In the United States, at least, virtually all alcoholics have difficulties of other kinds—medical, psychiatric, social, vocational, etc. Clearly the variety of existing helping agencies are in a position to be of substantial assistance to alcoholics with these types of problems. It is utterly inconceivable that any specialized network of services for alcoholics could duplicate this broad range of existing resources. Finally, and this is often forgotten, very substantial numbers of alcoholics are already in contact with one or another health and welfare agency. Frequently too, such persons are actually identified as individuals with drinking problems but the personnel of the particular agencies are neither adequately trained nor motivated to provide appropriate assistance to these patients. Furthermore, it is well known that the vast majority of the referrals made in the United States—for virtually all categories of patients—end up in failure. That is, the patient does not finally receive assistance from the agency to which he has been referred. For all these reasons it is increasingly evident that primary reliance will need to be placed on the existing system of agencies in overcoming the long-standing prejudice and discrimination against alcoholics. This will not be an easy task, but it will be far easier than developing separate networks or even major elements of a specialized nature.

There is one element in this system of general helping agencies that apparently is slated to play a key role in bringing about the long overdue improvement of community-based care and treatment services for alcoholics. This is the rapid growing system of community mental health centers. Currently well over 260 such centers have been funded through the National Institute of Mental Health. The community mental health centers program is an effort to return the care of psychiatric patients to the mainstream of health and social services. It is an effort to reverse the excessive reliance on inpatient services that has been highlighted by the central role of State hospitals. It is an effort to ensure continuity of care for patients.

The Five Essential Services

Community mental health centers to be eligible for Federal funds are required to provide five essential services for all patients in their particular catchment area. These services are emergency care, diagnostic care, inpatient care, partial hospitalization, consultation and education services for the community. It was the intent of the United States Congress in passing this legislation that these community mental health centers serve all patients in their areas needing psychiatric care and treatment. It was also the intent of Congress that these centers would finally afford treatment on an equal basis to such categories of patients as children, adolescents, the aged, narcotic addicts and alcoholics.

In a sense the community mental health approach represents two critical types of revoluntionary change—and both of these have major implications in relation to alcoholism. The first shift, of course, is a geographical one and has to do with returning the care and treatment of psychiatric patients to their own communities and reversing the past, virtually complete reliance on the usually distant State mental hospital. This geographical revolution has been difficult enough to achieve, but is dwarfed

in its importance by the second revolution. This consists of a qualitatively different approach to psychiatric problems. In a sense it involves the application of public health principles to the field of mental health. That is, to repeat a term that is now virtually a cliche, "the community itself becomes the patient." In the past psychiatric agencies—mental hospitals as well as clinics—have focused almost exclusively on the particular patients who happened to come and present themselves for treatment. There has been little or no effort to think broadly about the total range of psychiatric and social disorders in the community and to organize and develop a total network of services particularly suited to these problems. Rarely, if ever, has serious thought been given to determining the kind and scope of services to be developed. Since virtually all professional workers in the field of mental health—psychiatrists, psychologists, social workers and nurses —are clinically trained, it has turned out to be far more difficult to bring about this type of a community or public health focus than to achieve the shift from a mental hospital focus to a focus on community-based services. The relevance of these two revolutions for the area of alcoholism is abundantly clear. Services for alcoholics should be located in the community where patients and their families reside. Only in this way can the appropriate and required continuity of care be maintained and involvement of other community helping agencies obtained.

Despite the evident potentialities of community mental health centers for vastly improving care and treatment of alcoholics, this will not occur automatically. There still remain substantial barriers and resistances in terms of stereotypes, attitudes and inadequately oriented and trained personnel. Consequently, at least for an interim period of time, special attention will have to be given to the area of alcoholism to ensure that the long-standing neglect is overcome. This special attention may consist of certain personnel who are particularly designated as being responsible in the area of alcoholism. In some instances these personnel will have direct clinical (patient-care) responsibilities. However, it probably is a better utilization of such personnel to have them serve primarily in consultative, liaison, catalytic or community organization roles. In this way they can serve as ever-present reminders and sources of support and technical assistance to the far larger number of general mental health workers who will staff the growing network of community mental health services. Such personnel also can ensure the required coordination with other community agencies—medical, public health, social welfare, vocational rehabilitation, etc. The recently introduced "Alcoholic Rehabilitation Amendments of 1968"—to the Community Mental Health Centers Act—provide for just this kind of Federal support to community mental health centers. This Act proposes that special incentives be given to mental health centers for the development of services for alcoholics. It would indeed be tragic if the golden opportunity presented by the community mental health centers program were not utilized to vastly improve the care and treatment of alcoholics.

(*Editor's Note:* Dr. Plaut's article will be continued and concluded in the next issue of *Inventory*. The latter part will discuss the special problem of public drunkenness and approaches to the prevention of alcoholism and other alcohol problems.)

DIRECTORY OF OUTPATIENT FACILITIES BY COUNTY —for ALCOHOLICS and/or THEIR FAMILIES

Key to Facilities

+ Community Alcoholism Program
(supported jointly by the community and the N. C. Department of Mental Health)

*** Community Alcoholism Program**
(supported largely by funds from local boards of alcoholic beverage control)

‡ Joint Mental Health and Alcoholism Facility
(supported by the community and the N. C. Department of Mental Health)

† Mental Health Facility
(supported by the community and the N. C. Department of Mental Health whose services are available to alcoholics and their families)

Competent Help Is Available At The Local Level

ALAMANCE—

+ *Alamance County Council on Alcoholism,* Room 802, N. C. National Bank Bldg., Burlington 27215; Tel: 919-226-4403.

† *Alamance County Mental Health Clinic,* 221 Graham-Hopedale Rd., Burlington 27215, Tel: 919-227-6271.

ALLEGHANY (See Watauga)

ANSON—

† *Anson County Health Department,* Wadesboro 28170, Tel: 704-694-2516.

* *Education Division, Board of Alcohol Control,* 125 Wade St., P. O. Box 29, Wadesboro 28170, Tel: 704-694-2711.

AVERY (See Watauga)

BERTIE (Hertford)—

+ *Roanoke-Chowan Alcohol Information and Service Center,* 111 Belmont St., P. O. Box 143, Windsor 27983, Tel: 919-794-2895.

BEAUFORT (Hyde, Martin, Tyrrell, Washington)—

† *Tideland Mental Health Center,* 418 West Second St., Washington 27889; Tel: 919-946-4640.

BLADEN (See Robeson)

BUNCOMBE—

+ *Alcohol Information Center,* Parkway Offices, Asheville 28802, Tel: 704-252-8748.

† *Mental Health Center of Buncombe County,* 415 City Hall, Asheville 28801, Tel: 704-254-2311.

BURKE—

* *Burke County Council on Alcoholism,* 211 N. Sterling St., Morganton 28655; Tel: 704-443-1221.

CAMDEN (See Pasquotank)

CARTERET (See Craven)

CABARRUS—

† *Cabarrus County Mental Health Clinic,* 102 Church St., N.E., Concord 28025; Tel: 704-786-1181.

CATAWBA—

* *Catawba County Council on Alcoholism,* 420 Seventh Ave., S. W., Hickory 28601; Tel: 704-328-3564.

CHOWAN (See Pasquotank)

CLEVELAND—

† *Cleveland County Mental Health Clinic,* 101 Brookhill Rd., Shelby 28150; Tel: 704-482-3801.

CRAVEN (Carteret, Jones, Pamlico)—

‡ *Neuse Mental Health and Alcoholism Center* (Craven County Hospital, New Bern 28560; Tel: 919-638-5173, Ext. 294)

+ *Division on Alcoholism,* 411 Craven St., P. O. Box 1466, New Bern 28560; Tel: 919-637-5719.

+ *Division on Alcoholism,* 506 Broad St., P. O. Box 82, Beaufort 28516; Tel: 919-728-4033.

COLUMBUS (See Robeson)

CUMBERLAND—

† *Cumberland County Mental Health Center*:

+ *Division on Alcoholism,* Cape Fear Valley Hospital, Fayetteville 28302; Tel: 919-484-8123.

DARE (See Pasquotank)

DURHAM—

† *Department of Psychiatry,* Duke University Medical Center, Durham 27706; Tel: 919-684-8111, Ext. 3416.

* *Durham Council on Alcoholism,* 602 Snow Bldg., Durham 27702; Tel: 919-682-5227.

EDGECOMBE (Nash)—

† *Edgecombe-Nash Mental Health Clinic*

+ *Division on Alcoholism,* 228 Hammond St., Rocky Mount 27801; Tel: 919-442-8021.

FORSYTH—

† *Department of Psychiatry, Bowman Gray School of Medicine,* N .C. Baptist Hospital, Winston-Salem 27103; Tel: 919-725-7261.

† *Forsyth County Department of Mental Health*:

+ *Alcoholism Program of Forsyth County,* 802 O'Hanlon Bldg., 105 W. 4th St., Winston-Salem 27101; Tel: 919-725-5359.

† *Forsyth County Mental Health Unit,* 1020 E. 7th St., Winston-Salem 27101; Tel: 919-722-0364.

GASTON—

† *Gaston County Mental Health Center:*

+ Center For Alcohol Related Problems, 302 S. York St.; Gastonia 28052; Tel: 704-864-9771.

GUILFORD—

* *Alcohol Education Center,* P. O. Box 348, Jamestown 27282; Tel: 919-454-2794.

Family Service Agency, 1301 N. Elm St., Greensboro 27401; Tel: 919-273-0523.

Family Service of High Point, 113 Gatewood Ave., High Point 27260; Tel: 919-883-1709 or 919-833-2119.

+ *Greensboro Council on Alcoholism,* 216 W. Market St., 206 Irvin Arcade, Greensboro 27401; Tel: 919-275-6471.

† *Guilford County Mental Health Center,* 300 E. Northwood St., Greensboro 27401; Tel: 919-273-8281.

† *Guilford County Mental Health Center,* 942 Montlieu Ave., High Point 27262; Tel: 919-888-9929.

HALIFAX—

† *Halifax County Mental Health Center,* 701 Jackson St., P. O. Box 577, Roanoke Rapids 27870; Tel: 919-537-6174.

HARNETT (See Lee)

HENDERSON—

* *Alcohol Information Center,* 2nd floor, City Hall, P. O. Box 472, Hendersonville 28739; Tel: 704-692-8118.

† *Henderson County Mental Health Clinic,* 820 Fleming St., Hendersonville 28739; Tel: 704-692-2138.

HERTFORD (See Bertie)

HOKE (See Moore)

HYDE (See Beaufort)

IREDELL—

† *Iredell County Mental Health Clinic,* 221 South Center St., Statesville 28677; Tel: 704-872-7901.

JONES (See Craven)

LEE—

† Lee-Harnett Mental Health Clinic:

+ *Division on Alcoholism,* 106 W. Main St., P. O. Box 2428, Sanford 27330; Tel: 919-755-4129 or 919-755-4130.

MARTIN (See Beaufort)

MECKLENBURG—

* *Charlotte Council on Alcoholism,* 1125 E. Morehead St., Charlotte 28204; Tel: 704-375-5521.

† *Mecklenburg County Mental Health Center,* 316 E. Morehead St., Charlotte 28202; Tel: 704-334-2834.

+ *The Randolph Clinic, Inc.,* 1804 East Fourth St., Charlotte 28204; Tel: 704-333-9026.

MONTGOMERY (See Moore)

MOORE—

* *Moore County Alcoholism Program,* P. O. Box 1098, Southern Pines 28387; Tel: 919-692-6631.

† *Sandhills Mental Health Center* (Hoke, Montgomery, Moore, Richmond):

+ *Alcoholism Services,* Medical Center Building, Pinehurst 28374; Tel: 919-295-6851.

NASH (See Edgecombe)

NEW HANOVER—

* *New Hanover County Council on Alcoholism,* 211 N. Second St., Wilmington 28401; Tel: 919-763-7732.

† *Southeastern Mental Health Center,* 920 S. 17th St., Wilmington 28401; Tel: 919-763-7342.

ORANGE—

† *Alcoholism Clinic of the Psychiatric Out-Patient Service, N. C. Memorial Hospital,* Chapel Hill 27514; Tel: 919-942-4131, Ext. 336.

* *Orange County Council on Alcoholism,* Box 277, Carrboro 27510; Tel: 919-942-1089 or (if no answer) 919-942-1930.

PAMLICO (See Craven)

PASQUOTANK (Camden, Chowan, Dare, Perquimans)—

‡ *Mental Health and Alcoholism Authority:*

+ *Division on Alcoholism,* P. O. Box 645, Medical Bldg., Elizabeth City 27909; Tel: 919-335-1663.

PERQUIMANS (See Pasquotank)

PITT—

† *Coastal Plain Mental Health Center,* 1827 W. Sixth St., Greenville 27834; Tel: 919-752-7151.

+ *Pitt County Alcohol Information and Service Center,* 907 Forbes St., P. O. Box 2371, Greenville 27834; Tel: 919-758-3159.

RICHMOND (See Moore)

ROBESON (Bladen, Columbus, Scotland)—

† *Southeastern Regional Mental Health Center,* Medical Arts Bldg., Lumberton 28358; Tel: 919-739-7601.

ROWAN—

* *Educational Division, Rowan County ABC Board,* P. O. Box 114, Salisbury 28144; Tel: 704-633-1641.

† *Rowan County Mental Health Clinic,* Community Bldg., Main and Council Sts., Salisbury 28144; Tel: 704-633-3616.

SCOTLAND (See Robeson)

TYRRELL (See Beaufort)

VANCE—

† *Vance County Mental Health Clinic,* County Home Rd., Henderson 27536; Tel: 919-492-1176 or 919-438-4813.

* *Vance County Program on Alcoholism,* 158 Bypass W., P. O. Box 1174, Henderson 27536; Tel: 919-438-3274 or 919-483-4702.

WAKE—

† *Mental Health Center of Wake County,* Wake Memorial Hospital, Raleigh 27610; Tel: 919-834-6484.

* *Wake County Health Department,* 3010 New Bern Ave., Raleigh 27610; Tel: 919-833-1655.

WASHINGTON (See Beaufort)

WATAUGA (Alleghany, Avery, Wilkes)—

† *New River Mental Health Center:*

+ *Division on Alcoholism,* 210 W. King St., Boone 28607; Tel: 704-264-8759.

+ *Division on Alcoholism,* 101-A W. Main St., Wilkesboro 28697; Tel: 919-838-3551.

WILSON—

Aftercare Clinic, Encas Rural Station, Wilson 27893; Hours: Mon.-Fri., 8:00 a.m.-5:00 p.m.; Tel: 919-237-2239.

* *Wilson County Council on Alcoholism,* Room 308, 116 S. Goldsboro St., Wilson 27893; Tel: 919-237-0585.

Wilson Mental Health Clinic, Encas Rural Station, Wilson 27893; Tel: 919-237-2239.

WILKES (See Watauga)

EDUCATION AND INFORMATION SERVICES

INVENTORY—quarterly magazine using the techniques of education in presenting facts about alcoholism in popular, illustrated style.

Films—on alcohol facts and personality health for distribution among groups interested in brief, factual motion picture studies. Obtainable from the Film Library, N. C. State Board of Health, Raleigh, N. C. Please request films as far in advance as possible and state second and third choices.

The ARC Brochure—illustrated booklet on North Carolina's program for treating alcoholism as an emotional sickness.

The New Cornerstones—Family manual giving basic facts about alcoholism and suggestions for coping with the personality sickness.

Library Books—Books on alcoholism are available from the North Carolina State Library through local libraries to residents of North Carolina. To obtain any of the books listed in the March-April, 1964 issue of **Inventory,** go to your community library and make the request.

Staff Speakers—members of the Raleigh and A.R.C. staffs are available for speeches before civic and professional groups.

Teacher's Guide—kit containing reference material and pamphlets on alcoholism and mental health. Available to teachers from the Education Division, N. C. Department of Mental Health, Raleigh.

Consultant Service—for establishment of local programs.

These services are free upon request of citizens residing in North Carolina. For free materials in limited quantity, write

Education Division, N. C. Department of Mental Health
P. O. Box 9494
Raleigh, N. C. 27603

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